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Training Job Instructors

IT HAS BECOME axiomatic that no job-training program can be more effective than its leaders. Very few men are naturally gifted with the ability to organize instructional material and then get it across to others. No organization can depend safely, however, upon the chance discovery of these exceptional persons to supply the leadership necessary for any considerable program of job instruction. Experience has shown that instructors can be obtained only by means of an intelligent, well-planned program designed to develop an understanding of instructional methods and techniques and to give practice in their application. To quote from a bulletin issued by the Advisory Commission to the Council of National Defense:

> It is common knowledge that good mechanics do not necessarily make good teachers. Consequently, much time is gained and the interest and morale of the employees are preserved if all those who have the task of instructing them have been specially trained to do this work.[1]

In this article, The Conference Board presents the instructor-training programs of two concerns which have had years of experience with this vital problem. A commentary on questions which might be considered by an executive designing a procedure to meet his own organization's training needs is also included.

Instructor-Training Program, Footwear Division, Hood Rubber Company

The footwear division of the Hood Rubber Company, Watertown, Massachusetts, manufactures chiefly tennis and gum footwear. Each product is highly seasonal, but fortunately their peak-production periods do not coincide. The Company, accordingly, has been able through careful production planning and through a program of transferring workers and training them to perform several jobs, to achieve a relatively high degree of employment stabilization in a notably seasonable industry.

Most of the operations are unskilled or semi-skilled, and of a repetitive nature. Standardized methods of performing each have been evolved by time and motion study methods. The learning time required for each operation varies from a few hours to six or eight weeks, with about two weeks the average required to reach normal production.

The same training principles are followed with both newly employed personnel and with experienced workers who are transferred or are retrained in new methods or operations. Training always is given on the job, according to standardized methods worked out cooperatively by the methods department, supervision and the divisional training department. A standardization of training procedures is particularly desirable because of the exact production planning necessary with this kind of work, in which the speed of the manufacturing process is controlled by a number of sychronized and mutally dependent conveyors. Management must be able to predict the productivity of each operation with a reasonable degree of accuracy. After several years of experimentation, first with an "understudy" method, then with a vestibule school, the Company reached the conclusion that controlled job training could best be achieved through the use of trained job instructors teaching in the production departments.

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[1] Bulletin No. 2-A, "Expediting Production through Training," Advisory Commission to the Council of National Defense, Labor Division, Training-Within-Industry Committee, October 28, 1940.

Job Instruction

Over the past few years the footwear division has developed a group of about forty job instructors, selected from employed workers who are thoroughly familiar with the principles of motion study and with the standard method of doing the jobs which they will teach. When new operators are to be trained, one or more instructors are relieved of production responsibilities to devote their entire time to teaching. At first, instruction is given on an individual basis, or perhaps to groups of two or three. After the first few hours or the first day, the ratio of learners to instructors is increased. By the end of the training period, one instructor may be working with as many as fifteen or twenty learners.

Job instruction follows no definitely prescribed schedule, varying with different operations and instructors. Demonstration is accompanied by explanation, and discussion of important points is stimulated by suggestive questioning. The general plan used is indicated by the following outline, prepared several years ago for instructor-training courses:

OUTLINE FOR INSTRUCTOR'S TALK

1. Introduce yourself to operator, etc.
2. Question operator regarding previous work here or elsewhere, friends here, means of transportation, etc.
3. Show operator sample of article to be made and explain in a general way what part of the work is done in this department.
4. Before instructing tell about accommodations—restaurant, lunch wagon, retail store, dentist, etc.
5. Now point out or demonstrate the particular operation this operator is to be trained on with little or no explanation.
6. Again show sample of finished product and talk about lines, appearance and quality.
7. Explain what we mean by quality, etc.
8. Explain necessity for standard way of doing operation and why we use definite motions.
9. Explain other factors necessary: responsibility, stock, right size, other operators' work, etc.; cooperation, consideration of others; cleanliness; safety.
10. Explain reading of ticket and how to check back on specification. Necessity for knowing this on account of odd tickets, etc.
11. Demonstrate and explain several times the operation on which this operator is to be trained. Go through it slowly explaining the *how* and *why* of each step.
12. Before having the operators do anything more explain: training period; necessity for following instructions; standards, points; pay figuration; days' work, etc.
13. Begin actual instruction. Caution against hurrying. Insist, in a nice way, that instructions be followed. It is much harder to correct a bad habit which has been formed than to teach a new idea.
14. When you feel that operator is properly instructed, check by having operator tell how to do the job with the "why's": what her responsibility is, etc.
15. Follow-up or checking from time to time is most essential.

Following is an outline of the material which the instructors are charged with imparting to learners:

1. Nature of the product, the manufacturing process, organization of the department.
2. Flow of work to and from operator.
3. Sources of information needed on job.

(*Note:* In some departments, the above items of information are given by a chief instructor.)

4. Equipment and materials, care of machines and tools, safety requirements, stock conditions.
5. The operation: correct methods, quality requirements, cleanliness and housekeeping.
6. The essentials of motion economy, and the importance of doing the job the one best way.
7. Methods of computing pay.
8. Company policies and facilities affecting employees.

Selection and Training of Instructors

For the past year or so, the footwear division has not trained any new job instructors. They anticipate the necessity of doing so in the near future, and expect to change somewhat their method of training. Outlined below are the organization and functions of the division training department and the present attitude of the management toward selecting and training job instructors.

In the light footwear assembly division, which employs more than 1,000 persons, the training department consists of a training supervisor and an aide. It is a staff department, responsible to the division superintendent. Each production department within the division is responsible for training within its area. Job instructors are responsible to line supervision, which in turn is charged with the training costs. The function of the training department is to assist in:

(a) selecting and training job instructors
(b) prescribing training methods
(c) installing and supervising follow-up procedures
(d) predetermining the length of training periods, and
(e) advising on the probable production capacity of new employees.

Instructors will be selected, as in the past, on the basis of their job knowledge, ability to teach, and personality—how they get along with their fellow workers. Up to now, the Company has discovered no more accurate way of predetermining these last two factors than by the pooled judgments of supervision and of the training department. Naturally, the instructor-training program itself serves as a final screening process during which persons who do not possess these qualities can be discovered.

The actual training program will be given by the division training department and will consist of a series of rather informal individual and group conferences, consuming one or two hours daily for several weeks. In the past, printed material was used in the training of instructors, such as photographs showing the standard motions to be used on certain operations, and instructions on such matters as how to read specification sheets, the details of the Company incentive wage plan, and definitions of terms used in the manufacturing process. The training department is now organizing this material into an instruction manual.

As in the past, the following subjects will be emphasized in the instructor-training conferences:

1. The nature and responsibilities of the instructor's job.
2. The need for and the technique of making an operation analysis. The trainees probably will analyze their own jobs in order to test their understanding and to insure a consciousness of teaching points. Present thinking calls for a breakdown of each job into job elements, each of which in turn would be supplemented by a "method and difficulty analysis" describing the standard method of performing the element and the probable difficulties, and by a statement of the quality points involved.
3. The principles of effective instruction. The necessity of logically arranging information before presenting it, the importance of demonstration and test as well as of explanation, the influence on trainees of an instructor's attitude, and ways of introducing extraneous material in a natural fashion will be among the topics covered.
4. A review of company policies and systems, such as methods of rate setting.

It has been rather definitely decided on the basis of past experience that the conference procedure will be something as follows: In the first few meetings, the leader will confer individually with each potential instructor, and discuss subjects 1 and 2 above. He will work with each in the development of an analysis of her own job, and will emphasize the importance of the instructor's job from the standpoint of personnel relations as well as of production.

The third and fourth points above then will be developed in a series of group conferences, which will center on the idea of preparing each instructor to present a demonstration of her own job. At the outset of these conferences, the instructor-trainees will observe a job demonstration given by an already trained job instructor. Discussion of this performance will be developed by the conference leader to bring out the main features of the demonstration. In succeeding conferences, each trainee will herself prepare and give several demonstrations, which will be followed by suggestions and criticisms from the conference leader and from the other trainees. The purpose of this is to train her in self-expression, to instil confidence, and to ascertain by trial her actual performance. As a "final test" of each trainee's fitness for an instructing job before she actually enters upon it, she will be required to give a demonstration before the whole group augmented by members of supervision.

During the preparatory conferences, it is expected that the conference leader will have been able to put across the principles of good instruction by informally introducing and discussing them in connection with specific points arising during the demonstrations. At the close of the course he will summarize them more formally and will give each instructor her manual. The manual will cover such points as company policies for which instructors are responsible, the importance of organizing material, the five fundamental steps in teaching, the need for careful definition of all terms, the necessity of working from the simple to the complex, the need for giving reasons for everything, the wisdom of making learners "methods conscious" from the start, and the human problems involved in the learner situation.

* * *

From its experience with various methods of formal and informal job training of large numbers of rather low-skilled workers for jobs which must be done rapidly and accurately, the Company has found on-the-job training by competent instructors to be most successful. The teaching ability of the instructors naturally is dependent largely on the training they have received in how to teach.

INSTRUCTOR-TRAINING PROGRAM OF THE KEARNY WORKS, WESTERN ELECTRIC COMPANY

The Kearny works of the Western Electric Company manufactures telephone apparatus, cable, swithboards and various kinds of radio and motion-picture recording and sound-reproducing apparatus. The plant is divided into several production units, each of which has a complete shop operating force, including a unit personnel officer. To coordinate the personnel activities of the several units, there is a central industrial relations organization, the functions of which are to plan, coordinate, give expert advice and otherwise serve as a staff agency. The responsibility for administering personnel activities in each unit rests on the line supervision of that unit.

For some time the Kearny works has had an instructor-training program, "to furnish a supply of skilled instructors for training employees on production jobs." "Training" is defined as "giving assistance and encouragement in the perfection of job performance and preventing or correcting departures from the right ways of doing the job, thereby developing proper work habits."

The instructor-training conferences, each of which includes about a dozen persons, are conducted by a skilled conference leader from the central industrial relations unit. Although throughout the organization the supervisors are responsible for training within their departments, in some cases they delegate part of the training function to one of their workers. The trainees, therefore, in some cases are supervisors, in some cases hourly-paid workers who are considered to have potential teaching ability. During the training period they are relieved of all usual duties and put under the complete charge of the course leader. The conferences usually have lasted twelve days. The time devoted to each subject is flexible, however, and varies with the needs of the trainees. The periods of time mentioned below as being allotted to each subject, therefore, are averages, not fixed maximums or minimums.

The initial one and a half days of the course are devoted to a series of developmental conferences. Some of the basic principles of instructing are considered, among which naturally are the necessity of analyzing jobs before training persons on them and the technique of making job analyses for training purposes. Considerable time is devoted to discussion and demonstration. At the conclusion of the conferences, the trainees return to their own departments, where each analyzes a job on which he has worked. In the analysis a job is broken down, usually to a rather fine degree, into its component job assignments. The assignments then are broken down further into operations, which are listed in sequential order on a form. Each operation contains certain "related information ideas" which must be understood in order to do the job efficiently. The trainees are expected, in their analyses, also to list the "related ideas." The following headings appear on the job analysis form: the purpose of the operation, how the operation is performed, trade terms, safety items, care of tools, working properties, protection of materials. A trainee is allowed two and one half days to complete his analysis, during which time he is left alone except for occasional visits from the conference leader.

Next, the group discusses further the learning process, the steps of a lesson, methods of instruction, and ways of planning a lesson. The trainees learn to break down each "operation" into its essential ideas or teaching points and then list them together with the related facts which the job analysis has shown to be requisites of successful job performance. They then divide the ideas and facts into several units, each of which will be the subject of one lesson. The trainees discuss how to arrange the ideas included in a lesson in such a way that a learner can comprehend them with a minimum of effort. After a day and a half devoted to the above subjects, each trainee returns to his department and prepares several lesson plans on regulation forms. He is allowed another day and a half to complete his lesson plans. Each lesson is divided into four steps: preparation, presentation, application and test. (See the typical filled-out "Instructor's lesson plan" forms, covering the job assignment of micrometer reading, reproduced on the following page.)

The next three and one-half days are given over to supervised practice instruction. Each trainee is allowed to teach two lessons of fifteen minutes each, one production and one technical, to an employee who is not a member of the class and who does not know the material he is to learn. Members of the group who are not teaching observe the lessons and make notes on the performance of the trainee instructor. After the lesson has been completed and the employee has left the room, a discussion is conducted among the other trainees to get answers to certain questions, of which the following are typical:

Step 1—Preparation

1. Did the instructor put the man at ease?
2. How did he gain the man's attention?
3. What line of approach was used?
4. Were the questions broad and vague or definite and concrete?
5. Did the instructor keep on the track?
6. Could it have been put over as effectively in shorter time?

Step 2—Presentation

1. Did the instructor stick to his method?
2. Did he stick to his subject?
3. Could the learner easily follow the instructor without becoming confused?
4. What did the instructor do to cause the learner to lose interest?
5. Was the learner thinking all the time?
6. Was the instructor's manner effective?

Step 3—Application

1. Was the proper method used?
2. Did the instructor give the learner any encouragement?
3. Did the learner go at the job with confidence?
4. Was the supervision good and well distributed?
5. If the informational method was used, did it take effect?
6. Did the instructor at any time annoy the learner?
7. Was the instructor anticipating where the learner would fall down?

Step 4—Test

1. Did the instructor render any assistance during the test?
2. Was the learner thoroughly taught?
3. Did the results of Step 4 show up any weakness in Steps 1 and 2?

After the discussion has been completed the trainee who "put on" the lesson is given a chance to refute the answers advanced and to explain his procedure.

Instructor's Lesson Plan

INSTRUCTOR'S LESSON PLAN

JOB ASSIGNMENT Read Micrometer
LESSON NO. 1 Lesson Aim: Recognizing Component Parts

Step 1 Preparation Method: Directed Discussion

1. You know that a micrometer is composed of several parts.
2. We are now going to familiarize ourselves with these parts.

Step 2 Presentation Method: Demonstration and Lecture

1. Frame—shows fractions into decimals—nut at end.
2. Never drop.
3. Spindle and Thimble—attached—thread at end of spindle.
4. Keep chips from inside.
5. Sleeve—graduated into divisions.
6. Keep clean.
7. Anvil—work rests on same.
8. Keep clean—use paper.
9. Ratchet—for uniform pressure.
10. Don't spin fast.
11. Locking device—to use as guage.
12. Open when operating mike.

Step 3 Application Method: Demonstration and Directed Discussion

1. What is on the frame? (Decimals and fractions nut)
2. Why keep chips from inside? (Will ruin threads)
3. Why keep clean? (Will rust)
4. Why keep clean and use paper? (Paper cleans best)
5. Why not spin fast? (Will ruin threads)
6. Why open mike? (Will operate stiffly)

Step 4 Test Method: Demonstration by Learner
Same as 3.

JOB ASSIGNMENT Read Micrometer
LESSON NO. 2 Lesson Aim: Operation of Mike and Its Care

Step 1 Preparation Method: Directed Discussion

1. Will you agree that there is usually a one best way of holding any tool?
2. A micrometer is a tool. Would the same principle apply?

Step 2 Presentation Method: Demonstration and Directed Discussion, Developmental

1. Remove mike from tool drawer.
2. Keep in drawer. ("Mike" trade term.)
3. Pick up mike.
4. Don't drop.
5. Place frame in palm—ring—fingers inside of frame.
6. Convenient way to hold.
7. With thumb and index fingers rotate thimble.
8. Never force.
9. Put mike back into tool drawer.
10. Keep away from oil—water—chips.
11. If out of adjustment.
12. Return to tool crib for setting.

Step 3 Application Method: Demonstration and Direct Discussion

1. Why keep in drawer? (Will be stolen)
2. Why never drop? (Will throw out of adjustment)
3. Why convenient way to hold? (Practical way)
4. Why not force? (Will ruin threads)
5. Why keep away from oil—water—chips? (Rust—wear)
6. What to do if out of adjustment? (Return to tool crib)

Step 4 Test Method: Demonstration by Learner

The last day and a half is devoted to evaluating the course and discussing methods of keeping records of the success of trainees on the job. The latter are desirable in order that any change in technique which results in a shortening of the training period will be brought to the attention of the central organization to be disseminated to any other organization engaged in similar activities. The leader of the conference holds an interview within the next week with each of the trainees, during which individual problems are straightened out and the trainee's strong and weak points are discussed.

Experience indicates that the only certain way of discovering whether material that has been shown and explained to potential instructors has been absorbed is through practice. The Company has had ample demonstration that men given job training by instructors prepared in this course reach average production sooner than others. The reason appears to be that the instructors have received supervised practice in analyzing jobs, in planning courses of instruction based on these analyses and in teaching others.

COMMENTARY

Every industrial enterprise is the product of the ideas of the individuals who compose it, of habitual patterns of thought that have grown up over the years and of situations brought about by the interrelation of personalities. Consequently, it is impossible for anyone who is unfamiliar with the traditions, the inner workings and the production problems of a specific company to suggest, with any degree of assurance, the training program that will produce the desired results. It must be custom-built to solve the specific problems of the organization.

The following questions and answers are not presented, then, with the thought that there is any one right answer that will apply to all cases. They are intended to be points that might well be considered by the executive who is faced with the problem of developing a force of effective job instructors. They represent a consensus of the best thinking available on this problem which is of such immediate and vital importance to those industries whose production forces are expanding or about to be expanded.

The term "job instructor" as used below, means an individual of supervisory or non-supervisory rank who has received training in and is able to apply instructional techniques. "Job training" is used to describe the actual, first-line training of employees on production work.

1. Under what circumstances are trained job instructors desirable?

Every industrial organization constantly experiences changes of one kind or another—in personnel, in product, or in organization—which affects the jobs of certain of its employees and which, consequently, expose them to situations in which they have to learn. If the learning process is not directed, an employee cannot help but absorb both the good and the bad. The inauguration of a formal, planned program of personnel development thus does not mean the introduction of training in the organization, but, rather, the elimination of poor training. Trained job instructors are desirable in every organization, since every person exposed to a new situation is bound to receive instruction, good or bad, from some source.

2. What qualifications should be considered in selecting a person to be trained as a job instructor?

Regardless of the status, supervisory or non-supervisory, of a person considered for selection as a job instructor, there is agreement that he should know the job he is to teach well enough to command the respect of competent and experienced men in his field of work. The best course in "how to teach" cannot make an effective instructor out of an individual who does not know what he is teaching.

The consensus is that the other principal qualification to be looked for in a potential job instructor is a well-balanced personality. "Personality" has been described as being demonstrated by the way in which a person deals with things, ideas, people and himself. Although the best workman does not always make the best instructor, experience indicates that every instructor should have at least an average amount of mechanical dexterity or ability to deal with things. He also should be able to deal with ideas, to think for himself and draw his own conclusions from the facts before him. Most important, he should be able to get along with people, dealing with them on a basis of mutual friendship and cooperation rather than on bluff or the faculty of "being a good fellow." And, finally, the potential job instructor should deal fairly with himself. He should possess that intangible quality of "intellectual honesty" or "real character" which probably is indicated best by the degree to which persons who have associated with him over a period of time respect him.

3. What qualifications should be considered in selecting the person to train the job instructors?

A trainer of job trainers, like a first-line job instructor, should have a well-balanced personality and should know the job he is teaching. In his case the job taught is instructing others, as opposed to performing a production operation. Accordingly, it is doubtful if a man who himself never had been a job instructor would be able to establish his leadership effectively with a group of men who know their jobs and are trying to learn to teach what they know. The person who trains job instructors must possess, then, in addition to knowledge of his subject and personality, a demonstrated ability to teach others.

Frank Cushman, Consultant in Education in the United States Office of Education, recently expressed himself on this subject as follows:[1]

> An important part of the training of a first-line instructor should be derived from his experience in analyzing his job and identifying teaching or instructional content for his own use as an instructor. Obviously, since the trainer of teachers should have had this experience himself, he should, in order to function effectively in training others to teach, have a far greater knowledge of analytical methods in vocational education than a first-line instructor would need in his work.
>
> The person who trains teachers must have a comprehensive knowledge of methods of instruction and as complete as possible an understanding of how to modify or adapt such methods to many different teaching situations. In other words, the trainer of trainers should be especially proficient in the practice of the art of teaching, quite independent of the specific subject-matter of instruction . . .
>
> The ability to function efficiently as a trainer of trainers can never be developed merely by reading the literature on the subject. The information thus obtained must be backed up by actual experience in applying it in practice.

4. Should job instruction be a full-time job?

In many concerns this question can only be an academic one. There either are not enough new or experienced workers being trained in new situations to justify even the temporary employment of a full-time job instructor, or else the nature of the jobs is such that an understudy method of job training is the only one practical. Job instruction must be added to the usual responsibilities of foremen, lead men or experienced workmen.

In large or rapidly growing organizations, however, the trend seems to be toward training a few specially designated production workers as job instructors. These men are removed from their usual production duties as the occasion demands to devote several days, weeks or months to giving job training. This procedure has much to recommend it, as is mentioned elsewhere. There also appear to be several possible dangers, however. While working as an instructor an employee cannot help but represent the management in the eyes of his trainees. Upon his return to production work at the completion of the training period, perhaps located beside his own former trainees, the one-time instructor is apt to find himself in an unfortunate position psychologically, in a "twilight zone" halfway between supervision and workers. There is also the possibility that a successful instructor returned to production work will consider himself poorly rewarded for performing a good instructing job. These problems seem to be related to those outlined in question 5 below.

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[1] "Training Trainers to Train," *Employment Security Review*, February, 1940.

The answer to the question appears to be, ideally, that if possible, job instruction should either be a full-time job, or else should be accompanied by a change in status, authority or compensation commensurate with the responsibilities assumed. If instruction is performed by line supervision or others with special authority, it seems to be immaterial whether it is a part or a full-time function.

5. *Should a limited number of job instructors train in all jobs, or should each instructor train only in that job which he knows best?*

As outlined in question 2, an instructor should know the job he is teaching. In some highly skilled lines of work, it obviously is impossible for an individual to know more than one job well. In other kinds of activity, however, where the work is of a semi-skilled character, it is possible for one person to know thoroughly as many as a dozen jobs. If a small group of instructors is trained to know and to teach a large number of jobs, it is probable that the caliber of their instruction will be high. The more jobs taught, the more likely an instructor is to be in demand and, accordingly, to work on a full-time basis, thus eliminating the problem of the status of part-time, non-supervisory instructors discussed in question 4. At the same time, experienced operators not selected as instructors may resent instructors learning their jobs for the sole purpose of teaching them to someone else. They, possibly, will feel that their own abilities as instructors are being overlooked. It is likely that some of those individuals most proficient in teaching techniques will be the least proficient in acquiring job versatility. An answer to this question cannot be stated categorically; it must be determined in light of the personalities, the jobs and the circumstances involved.

6. *How should the wages of non-supervisory job instructors be determined?*

There appears to be little uniformity of opinion on this subject. Some executives believe that non-supervisory employees acting as temporary full-time job instructors should be paid a salary equivalent to their average earnings over the preceding few weeks or months of production work. In their opinion, the opportunity afforded while acting as an instructor to demonstrate potentialities and qualifications for promotion is ample compensation for the extra responsibilities assumed.

Other concerns make a practice of paying non-supervisory instructors a salary equivalent to their average production earnings plus a bonus of five, ten or fifteen per cent. Ten per cent appears to be the most usual figure. One company, in which learners are paid on an incentive basis, pays each instructor a salary based on his average production earnings in the past plus an amount equivalent to twice the bonus earned by the group he is instructing. If a group bonus is ten per cent, that of the instructor would be twenty per cent.

There appears to be a growing belief among officials of some companies that the salary paid non-supervisory workers while instructing on a full-time basis should be divorced from the wages they earn while on production work. The reasoning is that compensation should be paid on the basis of work actually performed, and that an individual giving job instruction is not performing the same job as he is when engaged in a production operation. The value in dollars and cents of an instructor's job can be determined through job evaluation, that is, through an appraisal, made in terms of some objective measuring stick, of the worth of instructing ability as compared to operating ability.

7. *Should job instruction be a line or a staff responsibility?*

There is general agreement that the final responsibility for job instruction should rest with line supervision. Among the reasons for this are that responsibility thus can be fixed definitely, that the instruction thereby is most likely to be applicable to current production needs and that in this way the importance of training can be emphasized to and will be accepted by both supervision and employees. The exercise of responsibility on the part of the line naturally means the supplying of leadership and direction. It also may mean actual participation to greater or lesser extent, in the giving of specific job instruction.

The fact that the line should be responsible for training does not imply, however, that the existence of a training staff is undesirable. On the contrary, there are many situations—for example, when the number of persons to be trained is large, or when the production duties of line supervision are so heavy that they cannot spare sufficient time to do an adequate training job, or when the same or similar training is necessary for jobs in a number of different departments—in which the establishment of permanent, centralized training is an economical and necessary move. Experience has shown that the determination of a training staff's exact functions and responsibilities should be recognized as being an important and delicate task which requires careful thinking and a complete understanding of the organizational situation. If the staff assumes too much responsibility the line may not cooperate and the training will tend to become isolated from production needs.

8. To what extent should line supervision be familiar with the methods and procedures of job instruction?

Obviously, every foreman should know generally how every job in his department should be performed, why it must be done in the prescribed manner, the probable results of failure to do so and possible corrective measures, and the qualifications necessary for its successful performance. If he actually gives job instruction, he should be as thoroughly trained in the technique of teaching as any job instructor. Even in those cases where job instruction is given by persons responsible to him, there is agreement on the fact that a supervisor should possess sufficient knowledge of the detailed procedures as well as of the principles of job instruction to be able intelligently to direct and evaluate their application by others. The more familiar he is with methods and procedures of job instruction and the more practice he has had in their application, the better will he be able to discharge this responsibility.

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Notes on Personnel Administration

Designing Training Programs for Supervisors

Throughout its training studies, The Conference Board has emphasized the need for greater attention to detail in preparing personnel development programs. Intelligent detailed preparation of a training course takes time, and in some cases inadequate planning has been due entirely to neglect on the part of management to provide sufficient man power for the work. In many cases, however, the size of the company has made it impossible to maintain a training staff that would have time to define the needs, investigate source materials and write the programs. As a result, adequate preparation, while recognized as valuable, has had to go by default and many companies today struggle under the handicap of partially planned, badly organized development programs.

The situation clearly indicated a need for detailed source material from which the program designer could select the elements that answered the needs of particular situations. To help in meeting this need, the Board has sponsored extensive field work as research background for Personnel Studies No. 15, No. 18, No. 22, and for other reports that are being prepared for publication. Designed to meet the same need in the field of supervisory training is R. O. Beckman's recently published book, "How to Train Supervisors."[1]

The author draws upon his years of experience in the field of conference leadership to make available two types of information that should be of value to many in program planning. The first and smaller part of the book is given over to a description of ways of building and maintaining an effective procedure. Methods are discussed for stimulating, directing and controlling group thinking. The process of preparing a topic is outlined in detail and emphasis placed on the use of charts in the meeting. Touching on the area that is uppermost in many minds today, Mr. Beckman suggests techniques for evaluating results in terms of meetings, trainees and leaders.

Having defined the method and discussed procedures, the author turns his attention to a demonstration of the practicality of his theory by applying it to typical supervisory training subjects. In the second division of the book, which for many will be the most valuable of the two, 200 pages are devoted to the development of 32 discussion outlines. In each the same pattern is used: the purpose of the discussion is defined, a discussion plan outlined and possible chart findings are listed. The detail of the outlines emphasizes, as nothing else could, the need for detailed preparation and at the same time reveals, through demonstration, techniques of planning that produce effective programs. The major contribution of the outlines, and undoubtedly their primary purpose in the author's mind, is to illustrate in specific terms the application of a method. In addition, however, they offer to the smaller organization a source of material upon which men who have the responsibility but not the time for preparation can draw for help. The outlines are so complete that, in the absence of an organized program, the book itself would make a contribution in stimulating creative thinking if it were made available to the supervisors. As an aid in planning, as a source of material and as a reference book for supervisors, this book would be a valuable addition to any company library.

On the other hand, it should not be forgotten that employees in some industrial plants or departments represent a selected group rather than an average population group and therefore it is possible that many more should be rated at the upper end of the scale than in a group selected at random. Following a mathematical formula for distribution of ratings may result in injustices and affect employee morale.

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[1] Harper and Brothers, Publishers, New York, 1940, 305 pp., $3.00.

Some companies are giving special attention to training foremen to rate their men properly. Usually, each employee is rated by several raters so that the final opinion is a cross-section of several individual opinions, in order to offset personal prejudice.

Another factor of importance is the rating-form itself. Increasing attention is being given to designing rating scales in terms of the duties of the jobs being rated, carefully defining the different gradations in the scale.

One of the popular methods of eliminating the "halo" rating is to arrange trips for the foremen to other departments in the plant and to outside plants. Increasing the foreman's horizon usually tempers his judgment regarding the performance of his own department.

House Organs

Companies publishing house organs and employee papers are now receiving with considerable interest the first issues of *Stet*, A House Magazine for House Magazine editors, published monthly by the Champion Paper and Fiber Company of Hamilton, Ohio.

Stet plans to present some of the editorial and mechanical practices, problems and ideas of industrial editors, and to digest the current news in this specialized but heretofore neglected field.

Any company which now contemplates reestablishing or inaugurating a new publication will be interested in a series of articles just started on "Starting a House Magazine." Companies may be placed on the mailing list for copies without charge, by directing their request to the publisher.

Industrial Health Meeting

Air Hygiene Foundation of America, the only national association of private industry that is supporting broad, fundamental research on the medical and engineering phases of industrial health, held its fifth annual meeting last month in Pittsburgh.

Representatives from the Foundation's membership of 225 companies, together with government officials and others, devoted particular attention this year to the problems of industrial health defense.

Simplifying the Credit Union Statement

Much has been done during the last two or three years to make the financial statements and operations of companies intelligible to their employees by issuing special reports that explain in simple terms what the various items represent and what story they tell. The practice is now spreading to the credit union, the employees' own financial organization, often the depository of his savings and the source of loans, in the financial condition of which he is vitally interested. A good example of the simplified credit union statement is that of the Swift and Company Credit Union shown below.

Credit Union Treasurer Dishes Up an Understandable Balance Sheet

Statement as of December 31, 1939 by
John Stech, Treasurer

RECEIPTS	
This amount has been saved by our members this year	$341,223.47
This has been repaid on loans made to members	481,161.80
This amount has been earned on the money loaned to members at ¾ or ⅔ of one per cent per month on unpaid balances	21,521.82
This is the two-bits you and others paid to join our Credit Union. This money may only be used to pay off any bad loans which might be made	118.25
This is interest received on Savings Account and Insurance Premiums	343.73
This is the amount of cash we had on hand at the beginning of the year	67,003.51
This gives us a balance of	$911,372.58

DISBURSEMENTS	
This money has been withdrawn from share accounts during the year	$287,881.01
This is the loan account. Every penny of this has been used for some good purpose. Wish I had room to tell you of some of the fine things it has done	543,884.59
This is what our expenses amounted to	8,646.78
"That's a lot of money," you may say. Yes, I know, but there are stationery, auditor's fees, league dues, salaries, office equipment, and insurance to pay.	
This is our petty cash fund. We use this for making change and it is the only part of the money we handle that we do not take to the bank	75.07
We paid out this amount as a 4 per cent dividend for last year	8,576.27
We had this in our Guaranty Fund which includes our entrance fees plus 20 per cent of our profits. This is for protection against possible losses	8,802.59
We bought a file cabinet that we haven't charged off to expenses yet. We call this our furniture and fixture account	546.93
We have	52,959.34
in the Drovers National Bank which gives us our balance of	$911,372.58

HERE'S OUR BALANCE SHEET ASSETS	
Our loan balance	$269,678.26
That is, loans which are outstanding on our books which are earning ¾ or ⅔ of one per cent per month for us.	
And here's that furniture and fixture account again	768.51
Our petty cash	75.07
And our check book balance	61,761.93
And our total	$332,283.77

LIABILITIES	
This is the total of all savings accounts	$313,414.69
This is our undivided earnings account	7,340.64
This is a reserve required by state law. It includes all entrance fees and 20 per cent of net earnings since organization	11,528.44
And our total	$332,283.77

These figures may not seem very impressive. We are used to seeing large figures in print, but they do give us some idea of what can be done in a cooperative way to help each other solve our financial problems. When we begin unselfishly to help the other fellow, we usually end up by helping ourselves.

Become Credit Union Minded. Use your Credit Union. Whether we save or borrow, we need each other's help. Let's work together for a common good.

A Glance at Labor Statistics

Average hourly earnings of all wage earners in 25 manufacturing industries increased from 74.2¢ in September to 74.4¢ in October. In October, 1939 the corresponding figure was 72.4¢.

Average weekly earnings of all wage earners increased from $28.99, in September to $29.86 in October, an advance of 3.0%. The figure for October, 1939 was $28.24.

Employment again rose sharply from an index of 99.8 in September to 103.4 in October, or 3.6%. This constitutes an increase of 11.9% since October, 1939.

Average hours of work per week advanced from 39.0 in September to 40.0 in October, as compared with 39.0 in October, 1939.

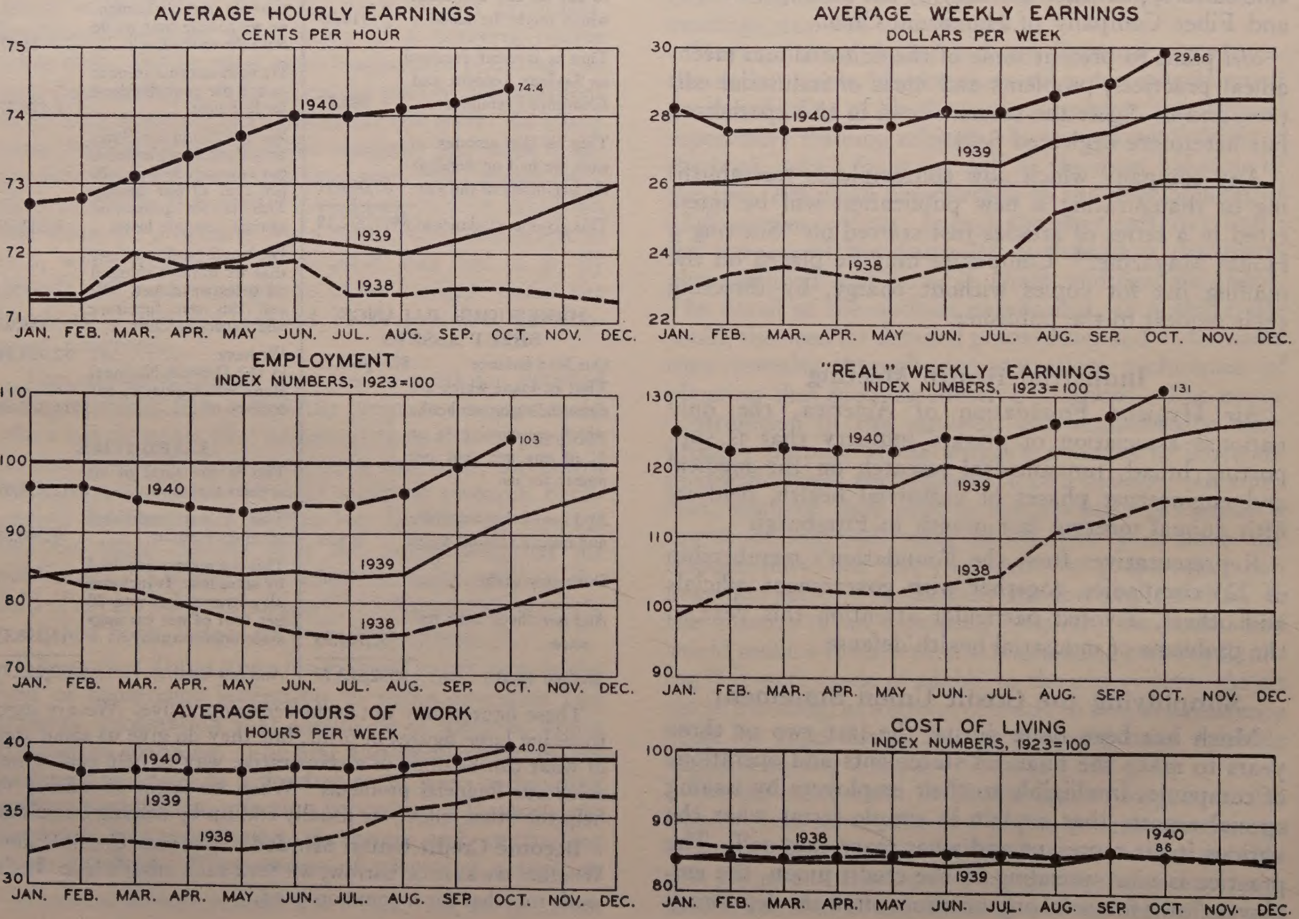
The cost of living declined slightly from 85.6 in September to 85.5 in October. This is not appreciably higher than the index of 85.3 in October, 1939. The purchasing power of the dollar on the basis of the cost of living stood at $1.170 in October, as compared with $1.00 in 1923.

Real weekly wages, or the purchasing power of money wages, increased from 127.2 in September to 131.2 in October. This marks an increase of purchasing power of 3.1% in one month.

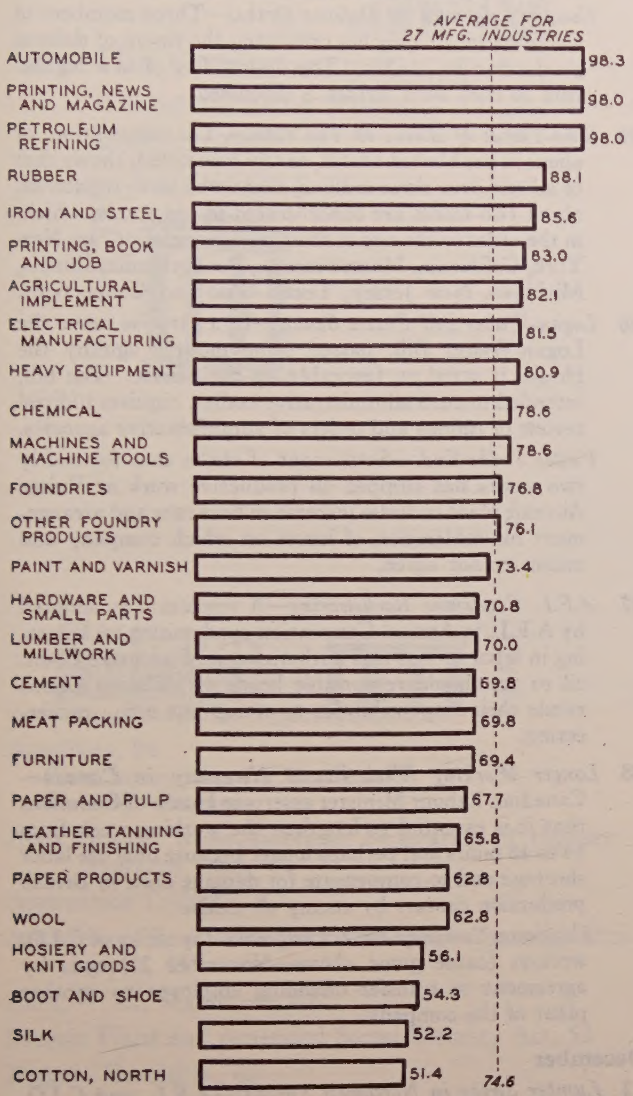
The number of unemployed persons in the United States, according to THE CONFERENCE BOARD's estimates, declined to 6,653,000 in October.

LABOR TRENDS IN 25 MANUFACTURING INDUSTRIES AND THE COST OF LIVING, 1938–1940

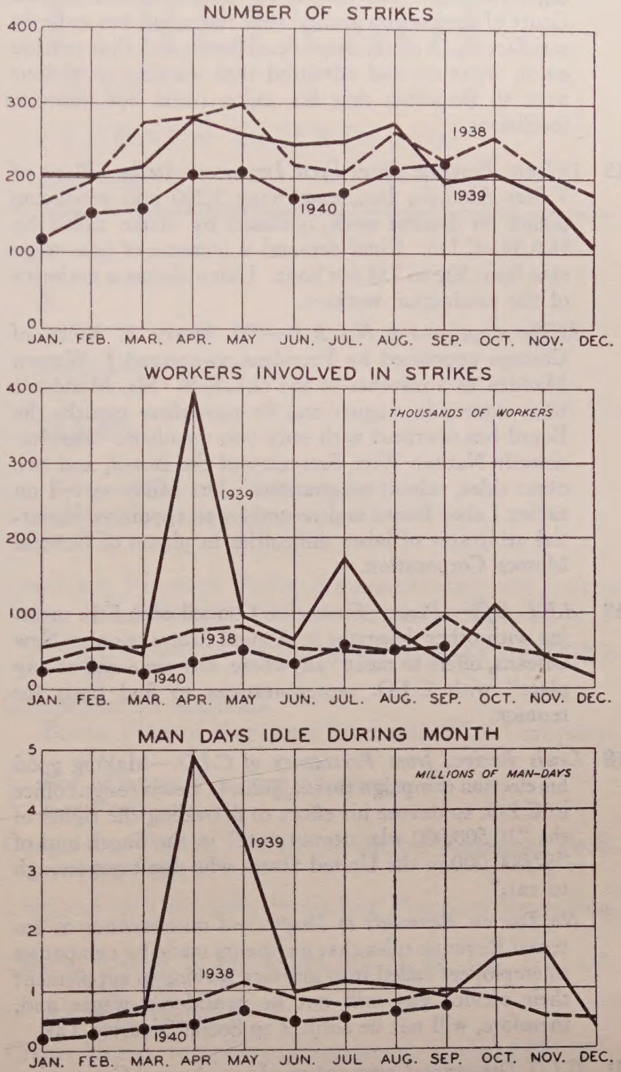
Source: THE CONFERENCE BOARD



AVERAGE HOURLY EARNINGS IN CENTS
27 MANUFACTURING INDUSTRIES, OCTOBER, 1940
Source: THE CONFERENCE BOARD



INDUSTRIAL DISPUTES, 1938, 1939 AND 1940
Source: U. S. Bureau of Labor Statistics



Chronology of Events Affecting Labor Relations November 11 to December 10

November

11 *Jurisdictional Dispute Delays Defense*—Jurisdictional controversy between carpenters' and laborers' unions which halted for five days work on cantonment buildings at Camp Dix, New Jersey, is settled by decision that carpenters' apprentices who had been used for unloading lumber may continue to handle fabricated materials, and laborers will handle rough material.

12 *Supreme Court Reverses N.L.R.B.*—The United States Supreme Court, with Justices Black and Douglas dissenting, holds that N.L.R.B. cannot require Republic Steel Company to reimburse relief agencies for amounts paid out to strikers. The powers of the Board, according to the decision, are remedial in assuring the right of collective bargaining and correcting unfair labor practices, but are not punitive, since Congress conferred on it no such powers.

14 *Independent Union Upheld*—N.L.R.B. order against A. E. Staley Manufacturing Company, requiring that company withdraw recognition of an independent labor organization, is overturned by United States Circuit Court of Appeals on ground that the union was entirely satisfactory to a majority of employees and that outside union organizer had admitted that working conditions were so favorable that his union could not improve conditions.

15 *Defense Program Faces First Important Strike*—Plant of Vultee Aircraft, Inc., employing 5,200 and producing planes for defense work, is closed by strike called by U.A.W.-C.I.O. Chief demand is increase of base wage rate from 50¢ to 75¢ per hour. Union claims a majority of the production workers.

Millis Appointed to N.L.R.B.—Dr. Harry A. Millis of Chicago appointed by President to succeed J. Warren Madden as a member of the N.L.R.B. Mr. Madden's term expired in August and for past three months the Board has operated with only two members. Simultaneously Nathan Witt, Secretary of the Board, and two other aides, submit resignations. Dr. Millis served on earlier Labor Board and recently was appointed impartial arbitrator of labor difficulties in plants of General Motors Corporation.

17 *A.F.L. Offers Peace*—Executive Council of A.F.L. meeting with other delegates in Annual Convention at New Orleans, offers to meet "anywhere, any time and at any place" with C.I.O. representatives to find basis for reunion.

18 *Lewis Resigns from Presidency of C.I.O.*—Making good his election campaign threat, John L. Lewis resigns office in C.I.O. to devote his effort to defending the rights of the "10,500,000 who cannot vote" in the South and of "52,000,000 in the United States who don't get enough to eat."

No Tax on Payments to Draftees—Commissioner of Internal Revenue rules that payments made by companies to employees called into military service to supplement their service pay will not be considered wages and, therefore, will not be subject to Social Security Tax.

21 *C.I.O. Denounces Communism*—In its Annual Convention at Atlantic City, the C.I.O. takes strong stand against Communism, unanimously adopting a resolution which denounced Communism as inimical to labor, opposed to democracy and destructive of the American form of government.

22 *Murray Elected C.I.O. President*—Philip Murray, S.W.O.C. head, accepts presidency of C.I.O. and promises intensive campaign to organize remaining unorganized plants in automobile, aircraft, chemicals, steel, shipbuilding and other industries. No optimism about a reunion with A.F.L. is voiced.

Another Defense Industry Strike Begins—New Kensington (Pa.) mills of Aluminum Corporation of America in which large defense contracts are under way are closed by a strike making 7,500 workers idle. Alleged cause of strike is refusal of company to discharge a union employee who had threatened a union official and members of his family when asked to pay delinquent union dues.

Congress Agitated by Defense Strikes—Three members of Congress make speeches criticizing the tie-up of defense production by strikes. The desirability of new legislation to curb such strikes is discussed.

24 *Two-Thirds of Aliens in Ten States*—The registration of aliens in the United States, nearly completed, shows that of a little over three milllion aliens who have registered, about two-thirds are concentrated in ten states, which, in the order of the size of their alien population, are New York, California, Massachusetts, Pennsylvania, Illinois, Michigan, New Jersey, Texas, Ohio and Connecticut.

26 *Logan-Walter Bill Passes Senate*—In a surprise move the Logan-Walter Bill, passed some months ago by the House, is acted on favorably by the Senate. The bill, intended to curb administrative bodies, requires judicial review of rulings and orders of administrative agencies.

Vultee Strike Ends—Settlement of strike that for nearly two weeks has stopped all productive work at Vultee Aircraft plant includes increase in base rate and arrangement for arbitration of issues on which company and union cannot agree.

27 *A.F.L. Condemns Racketeering*—A resolution is adopted by A.F.L. in Annual Convention condemning racketeering in labor unions and authorizing its Executive Council to act should responsible heads of affiliated unions evade their responsibilities to stamp out union racketeering.

28 *Longer Working Week Found Necessary in Canada*—Canadian Labour Minister asserts in House of Commons that it is essential to lengthen the working week from 44 to 48 hours and perhaps longer because of acute labor shortage and to compensate for damage done in British production centers by enemy air raids.

Aluminum Company Strike Ends—Six-day strike of C.I.O. workers (cause given above—November 22) ends by agreement to transfer offending employee to another plant of the company.

December

2 *Lumber Strike in Northwest Spreads*—A.F.L. and C.I.O. unions disregard jursidictional friction to bring about paralysis of lumber industry in Northwest. Mills in Washington and Oregon are being rapidly forced to close.

7 *Canadian Army Assists Industry*—Plan is devised to release temporarily skilled men in Canadian Army to speed up production. Between 1,000 and 2,000 highly skilled men in the Army will receive leave without pay for the winter at least to help speed up production of necessary munitions.

10 *Wright Pact Bans Strikes*—Agreement reached between Wright Aeronautical Corporation and an independent union of employees in which strikes, walkouts, sitdowns, slow-downs, stay-ins, or other forms curtailing or interfering with production are outlawed during period of contract.